

APPARATUS FOR CANCELLING INTERFERENCE IN CDMA
SYSTEM USING MULTIPLE TRANSFER RATES AND METHOD THEREOF

ABSTRACT OF THE DISCLOSURE

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The present invention relates to a receiver applicable to a code division multiple access system having multiple transfer rates. In a CDMA system, when performing a de-spreading process to extract information from received data in which various terminal signals or multiple path signals are asynchronously mixed, interference between a plurality of users or paths tends to occur. The present invention proposes an interference canceller for effectively canceling the interference between the users or paths. For this, the present invention implements a parallel interference canceller for estimating in parallel interference signals from asynchronously received signals and canceling the estimated interference signals from the received signals. In the present invention, when implementing a parallel interference canceller for asynchronously received signals, as bit information of the received signals is not aligned in the same time frame, the following conditions are considered. First, the accuracy of interference cancellation is maintained. Second, the time delay of signal processing is minimized to minimize the time delay of the entire system. In the present invention, in order to achieve these objects, reproduction of interference signals and the subtraction operation are optimized based on the arrival points and end points based of the fastest signal and the latest signal among the asynchronously received signals.

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